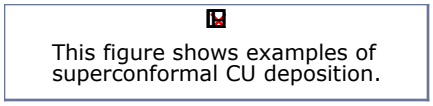
NISTTech

Composition and Process for Superconformal Filling by Electrodeposition

Docket: 14-023 Published Application: US 2015-0345039-A1

Images



This figure shows examples of superconformal CU deposition.

Abstract

We have invented an electrodeposition process that permits superconfonnal, defect-free, copper electrodeposition from base (here pH 12) electrolytes into sub-micrometer features, including demonstration in trenches, to form interconnects for microelectronics. Such capability is required for future technologies where electrolyte resistivity must increase along with the electrical resistivity of the thinning copper seed on the 300 mm silicon wafers that provides electrical connectivity during copper electrodeposition to fill the prepatterned damascene featured.

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Status of Availability

This invention is available for licensing exclusively or non-exclusively in any field of use.

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